


<p>Division of Maintenance</p>  <p>Permits Manual</p>	<p>Chapter</p> <p>UTILITIES</p> <hr/> <p>Subject</p> <p>Overview</p>
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**NEW OR RELOCATED
UTILITIES**

New or relocated utilities installed longitudinally must be located back of the ditch line and toe of slope as near the edge of right-of-way as practical or in designated utility strips. Utilities, other than storm sewers, shall not be placed in medians.

NEW FACILITIES

New facilities shall not be installed longitudinally under proposed pavement and shoulder areas. Utility poles or towers installed longitudinally must be located outside the clear zone. It is at the discretion of the Chief District Engineer (CDE) to determine where exceptions are to be allowed.

**ENTRANCE
TREATMENTS**

If crossroads or entrances adjacent to the mainline roadway are paved with concrete or bituminous surface, they should be bored. Exceptions may be made if the Permit Engineer determines that boring is not feasible. If traffic bound base is present, the open cut method may be used provided they are maintained in a traversable condition during construction. When the work is finished, they must be returned to the equivalent of their original condition.

**CONSTRUCTION
METHODS**

Construction methods or materials that allow voids in the roadway foundation shall not be permitted. No bell and spigot pipe nor other pipe that does not have a uniform outside diameter will be permitted in bored or augured installations unless they are encased.

**FRONTAGE RIGHT
REQUIREMENT**

If an application is made to install an encroachment on the state's right-of-way extending in front of the property of others, the signature of these owners stating their approval, or a copy of the recorded easement, must be attached to the application before a permit can be issued.


Frontage right requirements for municipal or public utility companies are waived when the permittee is a municipal or public utility company installing facilities to serve the public and the Department owns the property in fee simple. When a municipal or public utility company applies for permits to install private facilities not intended to serve the community, they are subject to property frontage rights and require the signatures or consent of the property owners in front of whose properties the utility is placed.

FRONTAGE RIGHT**REQUIREMENT (CONT.)**

When a permittee seeks a permit to install or extend a utility that is or will be owned and maintained for public use by a utility company, an authorized representative of the utility company must co-sign the application.

Exceptions to this policy will be evaluated on a case by case basis by the State Highway Engineer (SHE) Office and the Federal Highway Administration (FHWA) (if applicable).



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	<p><i>Subject</i></p> <p>Installations on Fully Controlled Access Highways</p>

**UTILITY INSTALLATIONS
REQUIREMENTS ON
FULLY CONTROLLED
ACCESS HIGHWAYS**

Utilities shall not be permitted to be installed longitudinally or overhead within the right-of-way of the interstate or other fully controlled access highways; unless the utility owner can show:

- **No Adverse Affects** - The utility facility will not adversely affect the safety, design, construction, operation, maintenance, or stability of the freeway
- **Construction/Servicing** - The utility facility will not be constructed or serviced by direct access from the through traffic roadways or connecting ramps
- **No Traffic Stoppages** – The utility facility will not cause any stoppages to traffic during the construction, operation, or maintenance of the facility
- **No Interference** - The utility facility will not interfere with or impair the present use or future expansion of the freeway
- **Alternative Location Not in the Public Interest** - This determination would include an engineering study that will be prepared and submitted by the permittee

UTILITY CROSSINGS

- **Overhead Utility Lines** – Support structures for overhead utility lines crossing an interstate on fully controlled highways should not be on right-of-way. If allowed, they must be outside the clear zone as designated in the current edition of the AASHTO publication "Roadside Design Guide".

Vertical Clearance -The vertical clearance of overhead utility lines crossing any interstate or other fully controlled highway must be a minimum of 24 feet.


- **Underground** – Open trenching of underground utility crossings of interstate or other fully controlled highways will not be allowed within the clear zone unless approved by the State Highway Engineer (SHE) and the Federal Highway Administration (FHWA), if applicable.

**UTILITY CROSSINGS
(CONT.)**

- **Encasement Required** - Encasement of utility lines under the highway right-of-way is required except for the following;
 - Natural Gas/Petroleum Fraction lines as (See **PE-304**, "Natural Gas and Petroleum Fractions")
 - Electrical, cable, phone, fiber optic, and other such utility lines encased in conduit
- **Depth Requirements** - The minimum depth for underground utilities is 42" except for Natural Gas and Petroleum Fraction lines (See **PE-304**, "Natural Gas and Petroleum Fractions"). Valves, vents, drips, blow-offs, etc., must be located outside the right-of-way
- **Construction methods** - Construction methods or materials that allow voids in the roadway foundation shall not be permitted. No bell and spigot pipe nor other pipe that does not have a uniform outside diameter will be permitted in bored or augured installations unless they are encased.

When the work is complete, all facilities must be returned to the equivalent of their original condition.



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**REQUIREMENTS ON
NON FULLY CONTROLLED
ACCESS HIGHWAYS**

- **Overhead Requirements** - The Department shall designate which utilities will be permitted to be installed overhead within the right-of-way.
- **Depth Requirements** - The minimum depth for underground utilities is 42" under roadways, ramps, and ditch lines and 30" in all other areas within state right-of-way except for Natural Gas and Petroleum Fraction lines. (See PE-304, "Natural Gas and Petroleum Fractions") Exceptions may be made only where the terrain is such that this requirement is proved to be impractical and where a lesser depth will not interfere with the highway maintenance or safety.
- **Utility Installations** – Utilities may be permitted longitudinally within, as well as across, the right-of-way limits. This is provided that they do not interfere with the safe use of the roadway, median and shoulder areas and will not interfere with the maintenance operations or aesthetics.
- **No Interference** – The utility facility will not cause any stoppages to traffic during the construction, operation, or maintenance of the facility without the consent of the Department.
- **Open Trenching**- The traveled way or shoulders cannot be excavated by the open trench method unless approved by the Department and shall be backfilled with flowable fill. In locations where flowable fill is unable to dissipate its bleed water, other methods can be used if approved by the department.

**ENCASEMENT OF
UTILITIES**


- **Encasement Required** - Encasement of utility lines under the highway right-of-way is required except for any of the following;
 - Natural Gas/Petroleum Fraction lines (See PE-304, "Natural Gas and Petroleum Fractions")
 - Longitudinal lines outside of the ditch lines
 - Pipe crossings 2" or less will not require encasement

**ENCASEMENT OF
UTILITIES (cont.)**

- Electrical, cable, phone, fiber optic, and other such utility lines encased in conduit
- **Construction methods** - Construction methods or materials that allow voids in the roadway foundation shall not be permitted. No bell and spigot pipe nor other pipe that does not have a uniform outside diameter will be permitted in bored or augured installations unless they are encased.

When the work is complete, all facilities must be returned to the equivalent of their original condition.



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REQUIREMENTS

The material to be transferred, the type of classification (transmission or distribution) of the pipeline, and the controlling regulatory code (Ky. Public Service Commission and/or U.S. DOT regulations) will be referenced on the permit.

**TRANSMISSION
LINES**

Transmission classified Natural Gas or Petroleum Fractions lines [operating above 20% Specified Minimum Yield Strength (SMYS)] shall be coated steel carrier pipe with an abrasive resistance over-coating (ARO) of sufficient strength to withstand the forces of installation, sufficient wall thickness to support anticipated loads, and constructed of extra heavy (Schedule 80 or greater) wall thickness within the right-of-way. (See ASTM 31.8b Standards of Pressure Piping-Gas Transmission and Distribution Piping Systems and Code of Federal Regulations Part 192). All permit requests for installation of transmission rated pipelines on KYTC rights-of-way shall include engineering plans, specifications, and documentation requested by the Department for all proposed work on KYTC right-of-way. The proposal will show design calculations and safety factor for the proposed installation. These plans must be stamped by a Kentucky Professional Engineer to certify that the proposal meets the requirements of the Ky. Public Service Commission and the U.S. DOT.

**DISTRIBUTION
LINES**

Steel distribution lines designed to operate at a hoop stress less than 20% of SYMS shall be cathodically protected carrier pipe as defined by Part 49 CFR 192.105. Design specifications and calculations that meet this requirement will be submitted with the permit.

**POLYETHYLENE
PIPE (PE)**

Polyethylene Pipes (PE) will be allowed for distribution lines when the proposal meets the Kentucky Public Service Commission and the U.S DOT requirements. These pipes shall be high or medium density polyethylene which is continuous or joined by an acceptable method, having a uniform diameter, and installed with a tracer wire or other reliable means to locate within the right-of-way.

DEPTH**REQUIREMENTS**

Lines located on rights-of-way of fully controlled access highways shall have a minimum of 60" cover.

Lines located on rights-of-way of non-fully controlled access highways shall have a minimum of 60" cover when located inside of ditch lines and a minimum of 42" cover outside of ditch lines.

Exceptions may be made where a lesser depth will not interfere with the highway maintenance or safety. Exceptions shall include an engineering study that will be prepared and submitted by the permittee.

ENCASEMENT


Encasement of lines shall be required except for the following;

- That are cathodically protected
- That are 2" and less on non fully controlled access
- Natural gas that has a cover of at least 60"
- Longitudinal pipes, outside of the ditch lines, on non fully controlled access highways
- Unusual circumstances where encasement is not feasible as determined by the Department

Encasements must have a uniform diameter (outside and inside) and shall be constructed of material of **sufficient wall thickness** to support anticipated loads. The casing must not be damaged nor deteriorated. All encasement pipes shall be of sufficient size to allow the carrier pipe to be installed, removed or replaced. The diameter of the hole through which the encasement is placed must not be more than one inch (1") larger than outside diameter of the casing pipe. Encasement pipes where possible should be sealed at each end to prevent material from entering the casing. Vent pipes shall be installed and they shall extend outwards as close to the right of way as possible. All plastic pipe installed within the right of way shall have a tracer wire or other means of locating the pipe.

Longitudinal pipes located outside of the ditch lines of non-fully controlled access highways with less than 42" cover may be permitted without casing on a site by site basis.



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	<p><i>Subject</i></p> <p>Bridge Installations</p>

**UTILITY
INSTALLATIONS
ON BRIDGES**

It is the Department's policy to grant approval of utility installations on bridges only when extensive engineering and economic research shows that all other means of accommodating the utility are not practical. In all cases where permit approvals are requested, the permit will be sent to the Central Office (CO) Divisions of Maintenance (Bridge Preservation Branch) and Structural Design for review.

It is the Department's policy not to approve any applications for installations of pipelines on bridges carrying any combustible material such as gas, petroleum, and similar materials required to be transmitted under pressure. Exceptions to this policy may be approved by the State Highway Engineer (SHE).

**MAINTENANCE
OF UTILITIES
ON BRIDGES**

Before any major repairs, other than routine maintenance to utilities within the right-of-way on bridges, the applicant must submit plans for repairs to the District Permits Engineer for review and approval. In case of an emergency, the request may be approved verbally by the district and confirmed in writing at a later date.

- **Annual Inspection** - The permittee must annually inspect all utilities placed on the structure to determine any failures or needed maintenance. A report of the findings must be submitted to the District Bridge Engineer. The utility company must send the report to the District Bridge Engineer by March 1.
- **Immediate Repairs** - Repairs of gas or water leaks, electrical transmission deficiencies, or any problem that the district thinks needs immediate attention, must be requested of the utility owner by legal notice. If the utility company fails to act within the specified time allowed, the district will request that the District Office Legal Counsel advise the company by letter that if necessary repairs are not made immediately, the Department will revoke the permit, the utility will be removed, and the expense will be charged to the permittee and collected as provided by KRS 177.106.



